

## WHAT IS CLAIMED IS:

1. A plant which confers resistance to pathogenic fungi, comprising a gene encoding an anti-bacterial peptide.
2. A plant according to claim 1, wherein the pathogenic fungi are *Rhizoctonia solani*, *Pythium aphanidermatum*, and *Phytophthora infestans*.
3. A plant according to claim 1, wherein the anti-bacterial peptide is derived from the Diptera insect.
4. A plant according to claim 3, wherein the anti-bacterial peptide derived from the Diptera insect is Sarcotoxin 1a.
5. A plant according to claim 3, wherein a gene encoding the anti-bacterial peptide derived from the Diptera insect is introduced into a plant in a form selected from the group consisting of: a recombinant gene containing the gene encoding the anti-bacterial peptide derived from the Diptera insect; an expression cassette in which the recombinant gene is bound to a plant promoter; and an expression vector composed of the expression cassette and a drug resistant gene linked to a plant promoter which is constitutively expressed.
6. A plant according to claim 5, wherein the recombinant gene which encodes the anti-bacterial peptide derived from the Diptera insect is bound to a plant gene via a hinge region of tobacco chitinase.
7. A plant according to claim 5, wherein the Sarcotoxin

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1a is bound to a signal sequence of a plant protein.

8. ~~A~~ <sup>the</sup> plant according to claim 5, wherein the plant promoter is the inducible promoter of the tobacco PR-1a gene.

9. ~~A~~ <sup>the</sup> plant according to claim 5, wherein the expression cassette has a terminator derived from the tobacco PR-1a gene.

10. A plant according to claim 9, wherein the expression vector further has a T-DNA region and a drug resistant gene.

11. A plant according to claim 10, wherein the drug resistant gene is expressed by the Cauliflower mosaic virus 35S promoter.

12. A plant with resistance to pathogenic bacteria, comprising a gene selected from the group consisting of: a recombinant gene in which a gene encoding an anti-bacterial peptide is bound to a plant gene via a hinge region of tobacco chitinase, an expression cassette in which the recombinant gene is bound to a plant promoter, and a gene having the expression cassette and a drug resistance gene linked to a plant promoter which is constitutively expressed.

13. ~~A~~ <sup>the</sup> plant according to claim 12, wherein the pathogenic bacteria is *P. syringae* pv. *tabaci* or *E. carotovora* subsp. *carotovora*.

14. ~~A~~ <sup>the</sup> plant according to claim 12, wherein the anti-

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a Sub A1 cont

Sub B3 7

a

Sub A2

a Sub B5 7

Sub B<sup>5</sup> >  
(cont)

bacterial peptide is Sarcotoxin 1a derived from a Diptera insect.

15. A recombinant gene in which a gene encoding an anti-bacterial peptide is bound to a plant gene via a hinge region of tobacco chitinase gene.

a 16. ~~A~~ <sup>The</sup> recombinant gene according to claim 15, wherein the gene encoding an anti-bacterial peptide is a gene encoding an anti-bacterial peptide derived from the Diptera insect.

17. A recombinant gene according to claim 15, wherein the anti-bacterial peptide derived from the Diptera insect is Sarcotoxin 1a.

Sub A3 > 18. An expression cassette in which the recombinant gene of claim 15 is bound to a plant promoter having resistance to pathogenic fungi.

Sub B<sup>7</sup> > 19. An expression vector for introducing the expression cassette of claim 18 into a plant.

Sub ~~AAAA~~ > 20. A plant which confers resistance to pathogenic fungi and bacteria, comprising a gene encoding a peptide which has anti-fungal and anti-bacterial activity.

ADD  
G10 >

add  
B1 >